HiCAMS User Guide

Chapter 11:
Sampling

Section 7:
Entering Samples for Concrete Pavement - 1995 Specs

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About Concrete Pavement Samples

The Resident Engineer (RE) office is responsible for documenting the testing of Concrete Pavement Samples in HiCAMS.

> **NOTE: This User Guide is only for Samples entered for Concrete Pavement placed under the 1995 Specifications. The Material for these Samples is "Concrete for Concrete Pavement - 1995 Specifications". Testing for Concrete Pavement under the 2002 Specifications is entered using the Field Inspection Report for Concrete Pavement.**

Concrete Pavement Samples are different from other samples because it is the Resident Engineer's office which is responsible for entering the sample AND entering the Test Results. The Resident Engineer also Authorizes the sample.

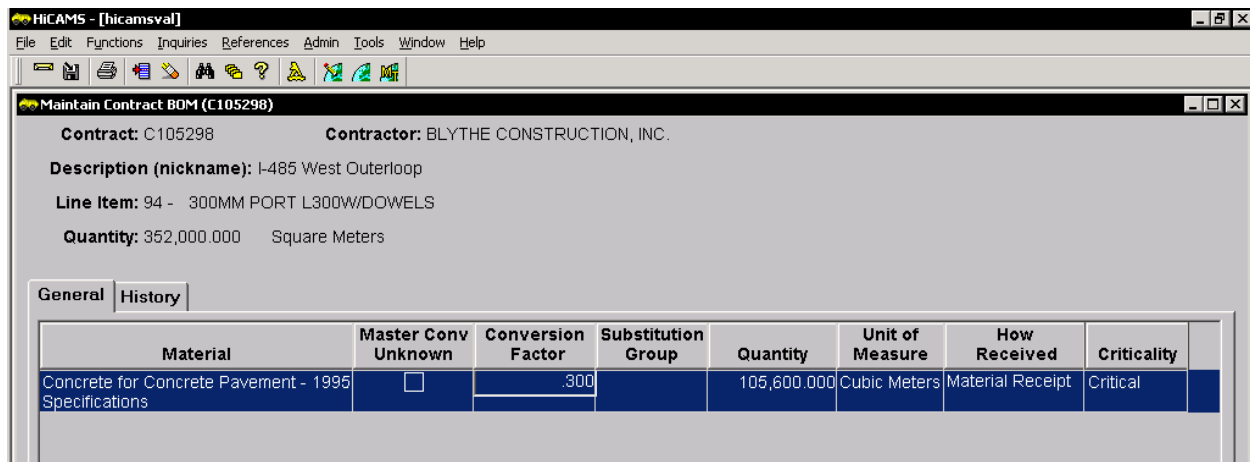# Entering A Sample for Concrete Pavement - 1995 Specifications

Before Samples can be entered, the Material must be present on the Contract Bill of Materials for each of the Concrete Paving Line Items on the Contract.

To confirm that this Material is present on the Contract Line Items, go to **Functions > Contract Maintenance > Review Contract BOM.** Enter the Contract Number whose Concrete Pavement samples you wish to enter in the Contract field.

> *Note: For information on ways to enter your contract number, see the User Guide "Getting Started" in the User Guides section of the HiCAMS home page.*

Select the Concrete Pavement Line Item and click on the Details button. Confirm that the Material "Concrete for Concrete Pavement - 1995 Specifications" is present. If it is not, it needs to be inserted before you begin to enter the samples.

Below is an example of the Maintain Contract BOM window for contract C105298 after adding the Material to the CBOM. *Since the Line Item is paid in Square Meters and the Material is received in Cubic Meters, the conversion factor is not set to 1.000.*

To enter a Sample for Concrete Pavement - 1995 Specifications, go to **Functions > Sampling > Enter Sample Details**. The Material Selection window opens with the default Search By set to Contract.

Step 1:   Enter the Contract Number for which you wish to enter the Sample in the Contract field. All the Materials currently associated with this Contract are listed.

Step 2:   To narrow your material search, select the Line Item for which you are entering the Sample either by typing in the Line Item number in the Line item Filter field or by selecting it from the drop down list.

Step 3: From the resulting list, select the material **"Concrete for Concrete Pavement - 1995 Specifications"** and click OK.

The Review Sample Details window opens.

Step 4: On the General Tab, complete the following fields:

Sample Owner: Project

Field ID: The tracking number assigned by the Inspector. This can be a numbers and/or letters.

Testing Category: Acceptance

Represented Quantity: Number of Cubic Yards or Meters this sample represents. Maximum lot sizes are 1,800 CY and 1,380 M3.

Note: The Authorizing Lab is set to REs Sample Authorization Lab so that the Resident Engineer office staff can enter the test results.

Step 5: On the Cont/Loc Tab, complete the following fields:

Sample From: Project

Location: Enter a short description of where the pavement was placed such as Mainline EBL

Station From / Station To: Enter at least a beginning station to help locate this material in case of failure

Step 6: On the Prod/Supp Tab, complete the following fields:

Approved Producer Supplier: Use the factory icon to select the Ready Mix producer or enter the RM number in the Search by Plant ID field

Date Produced: Enter the date the mix was produced

Concrete Mix: Click on the Factory icon. The Select a Concrete Mix Design window opens with the Producer and the contract number defaulted as well as all the approved mixes which are assigned to the contract

Note: Remember, Concrete Mix Designs are assigned on a Project by Project basis. The mix designs must be submitted to the Physical lab at M&T for approval prior to their usage on a project. To see what Concrete Mix Designs are assigned to a contract, go to References > Concrete Mix Designs > Assign Contracts and enter your contract number. The Ready Mix plants on this list are the ones that can be used for this contract.

Step 7: On the Tracking Tab, complete the following fields:

Sampled Date: Date the Concrete was sampled

Sampled By: Click on the staff icon to select the technician who sampled and constructed the Beams. This technician must have an Active Concrete Field Technician (Testing) Certification

Submitted Date: The date the Sample was delivered to the Lab

Submitted To: REs Sample Authorization Lab

Note: Because the Test Results are being entered by the Resident Engineer and not a Materials and Tests Lab, it is important to select REs Sample Authorization Lab as the Submitted To Lab.

Step 8: On the Line Item Tab, check to make sure that the Line Item in the lower portion of the window is the one that this Sample represents. The Line Item default to the one you used in the Material Selection window but it can be changed if necessary.

Note: To change the Line Item, drag the correct Line Item from the middle section of the window to the bottom section of the window. Then, drag the incorrect Line Item back to the middle section.

Step 9: Save the Sample.

Creating Multiple Samples

If a large quantity of samples with substantially the same information are being entered at one time, use the **Auto Generate** function. This is similar to a Save As functionality.

Step 1: If the Sample you will be using for your base Sample is not open, open it now.
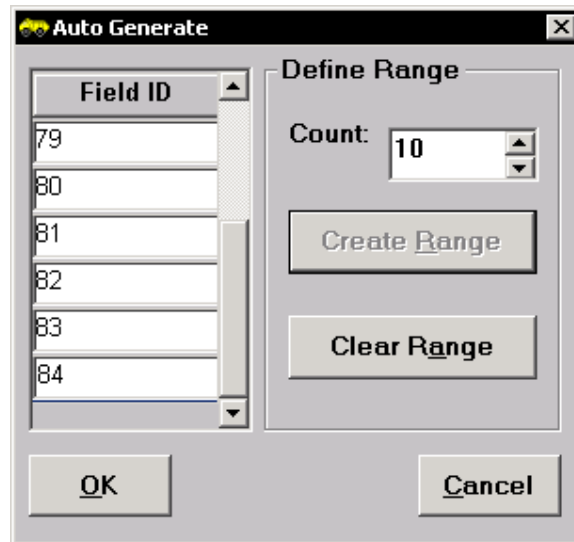
Step 2: Click on the **Auto Generate** button at the bottom of the window. The base Sample Field ID number is populated in the Field ID column.

> **Note:** *In order to use the Auto Generate function, the Sample's Field ID must end in a number, for example, 75 or R-75.*

Step 3: In the Define Range column on the right side of the Auto Generate box, enter the total number of samples you want to create in the Count box. Click on Create Range. The Auto Generate window now displays the additional Field IDs.
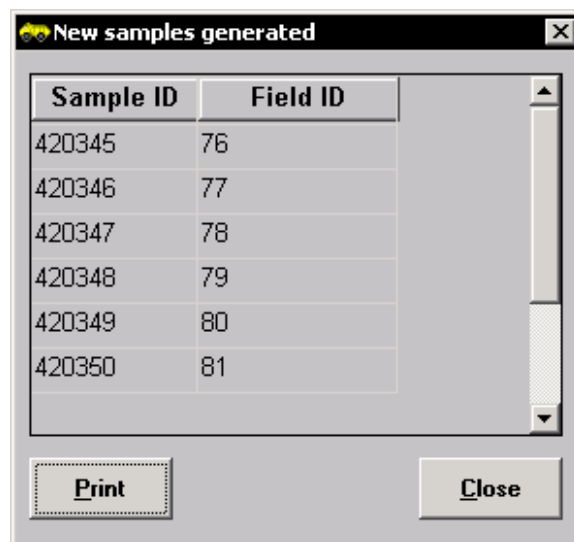
> **Note**: *Your original sample will count as the first sample. For example, entering the number 10 in the count box will create 9 additional samples.*

Step 4: If the correct number of samples are listed in the Field ID column, click OK. If not click Clear Range and Regenerate, or Cancel.

Step 5: The Sample IDs assigned to the Field IDs will now display in a popup window.

The Sample numbers can now be written on the sample record for tracking.

If a hard copy of the sample list is desired, a report showing the Field IDs and their associated Samples is created by hitting the Print button.

> *Note: The Samples that were autogenerated are **EXACT COPIES** of the original sample. If any information for the samples is different (Represented Quantity, Sampled Date, Sampled By, Concrete Mix Design, etc.), this information must be corrected before continuing the processing of the Sample.*

Step 6: To quickly access the samples you just created, go to **Functions > Sampling > View Pending Contract Samples** and type in your contract number. A list similar to the following appears:

In the example above, the data has been Word Wrapped and Click Sorted on the Material Description column so that it is easier to work with. This is done using the RT-Click menu.

To access the sample that needs to be changed, either click on the Details button or double click on the sample. Make your updates, and save the sample.

Entering Test Results and Authorizing the Sample

After the Sample has been entered, and the Tests conducted, the Test Results must be entered.

Prior to entering the Test Results, the Sample must be Received.

Step 1: To Receive the Sample, go to **Functions > Sampling > Receive Samples**. This window may take longer than usual to load as the Samples are not filtered by Resident Engineer office.

Step 2: In the column labeled Action, select Receive from the dropdown list. When all Samples have been received, click on Save. The Samples that have been Received no longer appear on the list.

Step 3: When all samples have been received, Save, and close the window.

Below is an example of the Receive Samples window after some Samples have been received and before the Save has taken place. Note that the column Forwarding or Receiving Lab has changed from None to REs Sample Authorization Lab for these samples.

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File Edit Functions Inquiries References Admin Tools Window Help

Receive Samples

Samples Pending Receipt at [REs Sample Authorization Lab ▼]

Sample/Part	Contract/ Field ID	WBS	Material	Action	Forwarding Or Receiving Lab
420353	C105298 / 84	34410.3.8	Concrete for Concrete Pavement - 199	Receive	REs Sample Auth
420352	C105298 / 83	34410.3.8	Concrete for Concrete Pavement - 199	Receive	REs Sample Auth
420351	C105298 / 82	34410.3.8	Concrete for Concrete Pavement - 199	Receiv ▼	REs Sample Auth
420350	C105298 / 81	34410.3.8	Concrete for Concrete Pavement - 199		(None)
420349	C105298 / 80	34410.3.8	Concrete for Concrete Pavement - 199		(None)
420348	C105298 / 79	34410.3.8	Concrete for Concrete Pavement - 199		(None)
420347	C105298 / 78	34410.3.8	Concrete for Concrete Pavement - 199		(None)
420346	C105298 / 77	34410.3.8	Concrete for Concrete Pavement - 199		(None)
420345	C105298 / 76	34410.3.8	Concrete for Concrete Pavement - 199		(None)
420344	C105298 / 75	34410.3.8	Concrete for Concrete Pavement - 199		(None)
419479	C201277 / R46	34233.3.1	Concrete, Class AA		(None)
419478	C201277 / R45	34233.3.1	Concrete, Class AA		(None)
419477	C201277 / R44	34233.3.1	Concrete, Class AA		(None)
419476	C201277 / R43	34233.3.1	Concrete, Class AA		(None)
419475	C201277 / R42	34233.3.1	Concrete, Class AA		(None)
419472	C201277 / R41	34233.3.1	Concrete, Class AA		(None)
419467	C201277 / R40	34233.3.1	Concrete, Class AA		(None)
419465	C201277 / R39	34233.3.1	Concrete, Class AA		(None)
419462	C201277 / R38	34233.3.1	Concrete, Class AA		(None)

[Test Formats]　　　　[Details]

Ready

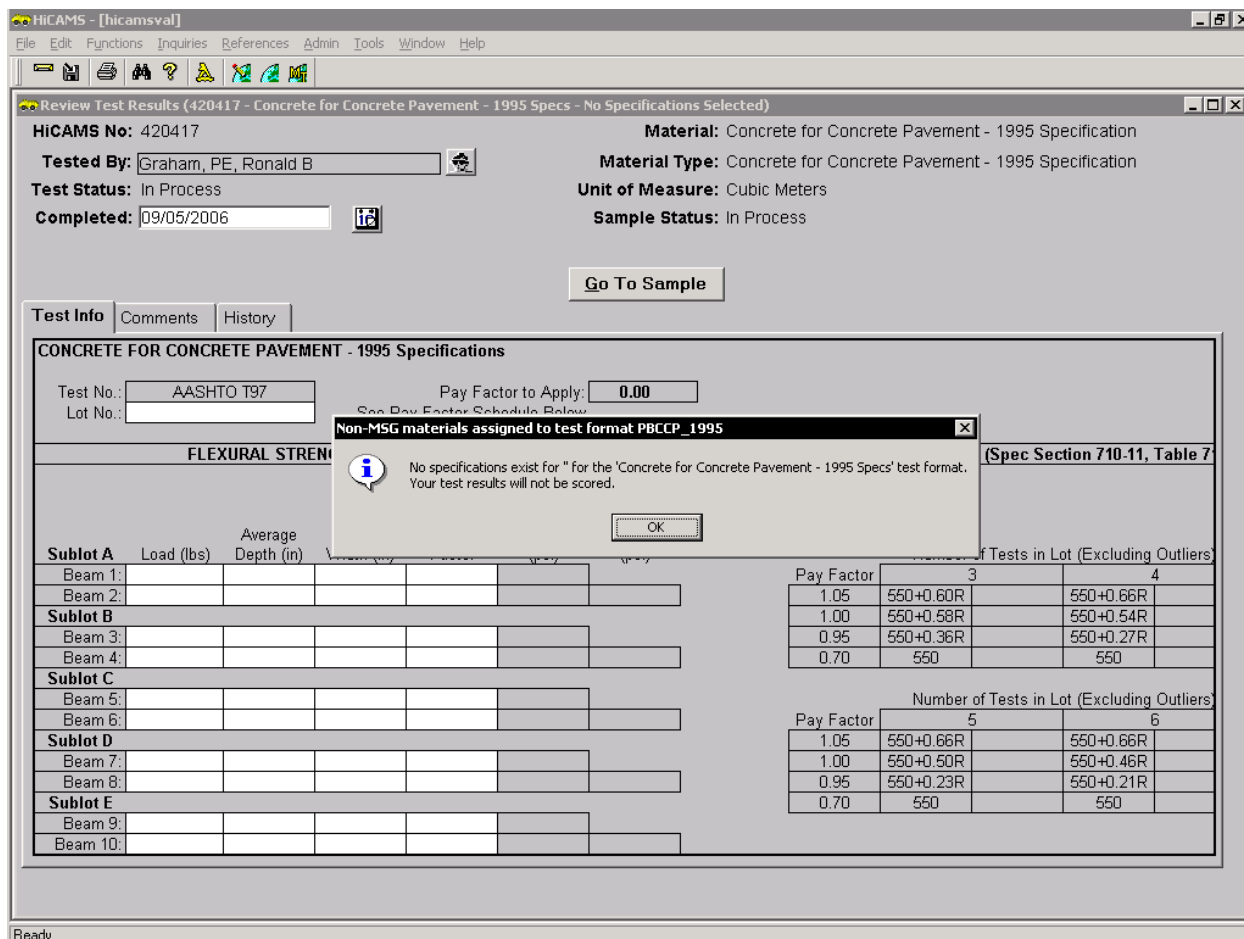Now that the Samples have been received, the Test Reults must be entered.

Step 4:   To enter the Test Results, go to **Functions > Sampling > View Pending Lab Samples**. This window may take longer than usual to load as the Samples are not filtered by Resident Engineer office.

Note: The Pending Samples are listed in descending Sample number order. To find the Samples for your project, you can Click Sort on the column labeled Contract / Field ID.

Step 5:   Select a Sample, and click on the Test Results button at the bottom of the window. The Review Test Results window opens and displays an error message stating that No specifications exist for the "Concrete for Concrete Pavement - 1995 Specs" test format. Your test results will not be scored. Click OK.

Note: This message appears because the Sample status is set manually.

Here is an example of how the Review Test Results window looks.

Step 6: The information for each sublot should be entered in the appropriate fields. Any questions about what should be entered can be addressed to the Materials and Tests Unit at 919 - 329 - 4200.

Step 7: When all the Beam data has been entered, click Save.

Step 8: A popup message appears asking "Is all testing complete?
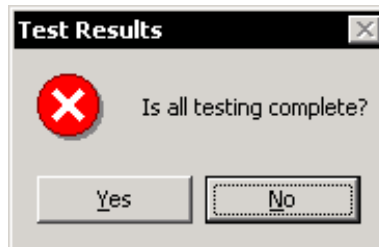
Answering No will leave the status at In Process and allow additional data entry. The sample will remain in the View Pending Lab Samples list. See the topic "Updating and Changing Existing Records" to continue with Processing the Sample. Answering Yes will set the sample status to Complete and prohibit any changes to the test results without changing the status.

Step 9: Click on Yes if all test result data entry is complete. Another message will appear asking if you would like to authorize the Sample.
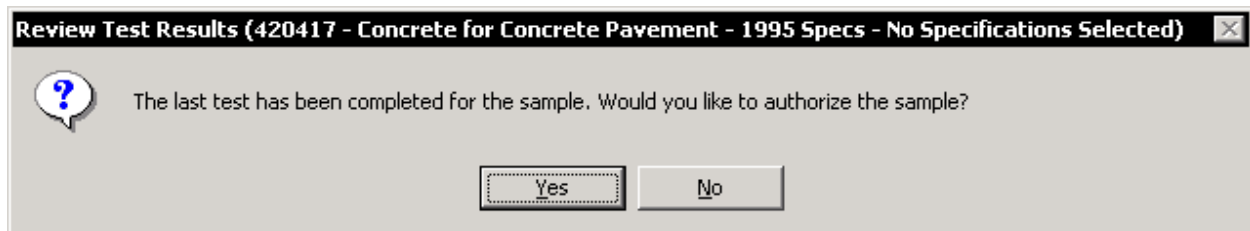
Answering No will leave the status at Complete. The sample will remain in the View Pending Lab Samples list. See the topic "Updating and Changing Existing Records" to continue with Processing the Sample. Answering Yes will initiate the Sample Authorization process.

Step 10: If you are ready to Authorize the sample and assign the final status, click on Yes. The Review Sample Details window opens and displays a dialogue box for the Sample Authorization process. An example of this window is shown on the following page.

Set the Sample Test Status to the apporpriate result based on the results of the Beam break data.

> *Note: If the Pay Factor to Apply is **less** than 1.0, the Sample Status should be set to Does Not Meet Specifications - PAR. This will activate the PAR button on the Sample and require the Resident Engineer to enter Disposition Amounts and a Comment on the Sample before processing the Final Estimate. Then click on the PAR button to create the PAR.*
>
> *If the Pay Factor to Apply is **greater** than 1.0, the Sample Status should be set to Meets Specifications and the Incentive Pay Adjustment created as a Miscellaneous type. There will be no linkage to the Sample for positive PARs.*

Updating and Changing Existing Records

The data entry for Concrete for Concrete Pavement - 1995 Specifications Samples may need to be interrupted and completed at a later date. Here's how to continue your data entry at various stages in the process.

Setting a Sample Status to Complete

If you answered No to the question "Is all Testing complete?" in Step 8 of the Entering Test Results topic above, and it is now time to Complete the Test Results, navigate to the Sample by going to **Functions > Sampling > View Pending Lab Samples**.

Step 11: Highlight the Sample you wish to Complete and click on the Test Results button at the bottom of the window. The Review Test Results window opens.

Step 12: In the header of the Sample, click in the Completed date field and enter the date that testing was completed. Save the Test Results. This will open the "Is all Testing complete?" box and allow you to now say Yes.

Step 13: The message box asking if you would like to authorize the Sample will appear. Click Yes if you want to Continue with the Authorization of the Sample.

Authorizing a Sample with complete Test Results

If you answered No to the question "Would you like to authorize the sample?" in Step 9 of the Entering Test Results topic above, and it is now time to Authorize the Sample, navigate to the Sample by going to **Functions > Sampling > View Pending Lab Samples**.

Step 1: Highlight the Sample you wish to Authorize and click on the Details button at the bottom of the window. The Review Sample Details window opens.

Step 2: Click on the Authorize button at the bottom of the window. The Sample Status box opens and you can now continue with setting the sample to the correct status.

Changing a Sample or Test Results after the Sample has been Authorized

Step 1: Navigate to the Sample that requires changing by going to **Functions > Sampling > Review Sample Details**. Enter the sample number in the field Sample ID. The Review Sample Details window opens.

Step 2: Click on the Unauthorize button at the bottom of the window. A popup window opens and warns you that All changes will be saved after Unauthorize if you continue. In order to make your changes, click on Yes. Yo u will be required to enter a comment.

Step 3: Changes can now be made to the Sample or to the Test Results. Be sure to Authorize the Sample when you are done with the corrections.

Remember

1. The Pay Factor to Apply is calculated by the Test Result, but neither the Pay Factor nor the Represented Quantity is carried forward when the PAR button is clicked. Both of these fields will need to be entered manually.

2. The Sample Represented quantity is in Cubic measurements and the Pay Adjustment Recommendation quantity is in Square measurements. Be sure to update Quantity to the correct amount when you create the PAR.

3. If the Sample status is *Does Not Meet Specifications - PAR*, navigate to the PAR window by clicking on the PAR button on the Review Sample Details window. If the Sample status is Meets Specs, create the PAR by creating a New PAR on the Review Pay Adjustment Recommendation window.